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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Jeffrey David SHELLEY  
Kurtis L. BROWN

Group No. 1771

Serial No.: 10/010,620

Examiner: E. Cole

Filing Date: 06 December 2001

Title: MULTI-LAYER APPROACH TO  
PRODUCING HOMO FILAMENT  
CRIMP SPUNBOND

Customer No. 35844

Confirmation No. 6625

## APPELLANTS' REPLY BRIEF

**Mail Stop Appeal Brief-Patents**

Commissioner for Patents

P.O. Box 1450

Alexandria, Virginia 22313-1450

Dear Sir:

Applicants herewith submit in triplicate their Reply Brief in the above-identified case, responsive to the Examiner's Answer of 28 May 2004.

I hereby certify that this correspondence (along with any paper referred to as being attached or enclosed) is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450 on

28 July 2004

28 July 04  
Date

Roland W. Norris  
Signature

Responsive to the Grounds of Rejection, section 10, and the Response to Arguments, section 11, of the Examiner's Answer, Appellants' reply:

Claimed Products

The Examiner has misconstrued the teachings of Arnold by an overbroad generalization, stating: "Arnold teaches that compacted nonwoven fabrics are less desirable because of their decrease in bulk or loft, (col. 1, lines 23-27)." See Examiner's Answer at page 3, line 16. This statement is only conditionally correct. The teaching of Arnold, per the sentence at col. 1, line 27, places conditions on the teaching by stating: "causing a decrease in bulk or loft in the fabric which may be undesirable for the use desired." (emphasis added)

The Examiner then asserts that: "It would have been obvious ... to have formed the fabric of Arnold et al. so that it comprised layers that comprised the crimped homopolymeric fibers of Kane et al. One of ordinary skill in the art would have been motivated to employ the fibers of Kane et al because Kane et al teaches that these fibers produce a particularly lofty web (col (sic) and Arnold is particularly concerned with forming a lofty, noncompressed web." See Examiner's Answer at page 4, lines 1-6.

If, as it appears in this instance, the Examiner is saying that a substitution of the homopolymer crimped fibers of Kane for the fibers usable with the hot air knife (HAK) process of Arnold will result in a lofty web, this is incorrect. As previously pointed out by Appellants (e.g., at Amendment A, page 12, line 1) use of a HAK (as in the process of Arnold) on homopolymer crimped fibers is particularly taught against in the present invention as decreasing loft (see e.g. specification at page 3, lines 1-4).

If, in the alternative, the Examiner is saying that a web of fibers made according to Kane would obviously be desirably attached to a web made according to the method of Arnold, this is also incorrect. No teaching within the references or the art implies that such a combination of webs is *prima facie* desirable (without resort to the present invention). After constructing its lofty base layer by use of a HAK to thermally bond the web without compression rollers, Arnold gives no teaching with respect to the desirability of loft for any additional layers to be attached thereto (as at Arnold col. 4, line 58 or col. 7, line 34).

Kane, on the other hand, teaches a self supporting web. Kane does not suggest a lamination of its lofty web to a base layer made according to Arnold because the lofty web of Kane has been sprayed and set with binder which is then oven cured to be self-supporting (col. 5, lines 50-67). But for the present invention, there is no suggestion of combinability for Kane and Arnold, nor any desirability of such combination. The combination of the layers of Kane and Arnold (to suggest the products of the present invention) comes not from the art, but from the Examiner.

In section 11 of the Examiner's Answer, the position of the Examiner is essentially that: because Arnold presents a stable nonwoven layer which can be laminated to another layer, and because Kane presents crimped homofilaments, the webs of both references can be combined to suggest the product of the present invention. As discussed above, no such motivation exists within the references and such a conclusion clearly presumes knowledge of the present invention and is the result of *post hoc* reasoning.

#### Claimed Processes

Appellants first note that the Examiner conducted a telephone interview with Appellant's undersigned Attorney on 10 May 2004 at which time the Examiner offered to allow the process Claims 7-11, 13, and 15-20. In response to this offer the Appellants suggested on 18 May 2004 that the Examiner merely indicate that the rejections of the process Claims were withdrawn and that the Board be allowed to decide only the merits of the product Claim rejections. However, upon receiving the Examiner's Answer, in subsequent conversation with the Examiner on 08 June 2004, Appellants were informed that the Examiner's previous position with respect to the Allowability of the process claims had been over-ruled by the Examiner's Conferees and that the Appeal of all Claims must be decided by the Board.

Section 11 of the Examiner's Answer attempts to refute the Appellants' arguments and make the case for obviousness by asserting that a web of Kane's fibers may be added to Arnold's base web after the web of Kane is formed, thus meeting the steps, in order, of the presently claimed invention.

Appellants submit that the rejections do not consider the claim(s) as a whole, which, as discussed herein and previously in Appellants Appeal Brief, includes the order of the steps.

With regard to the process claims, the rejections do not provide sufficient reason or convincing logic as to how or why the processes of Kane & Arnold would be specifically combined to achieve the process the present invention. Only high level generalities of vague motivation, without practical suggestion for combining the disparate processes of Kane & Arnold, are presented. Essentially, the rejections state that: because Arnold presents a stable nonwoven layer which can be laminated to another layer, and because Kane presents crimped homofilaments, the processes of both references can be combined to suggest the practice of the present invention. Such a conclusion clearly presumes knowledge of the present invention and is the result of *post hoc* reasoning.

The combination of Kane & Arnold presents no teaching for practicing the series of steps necessary to accomplish the step of Claim 7d).<sup>1</sup> That is, if per the Examiner's suggestion, a set web of Kane's "already crimped fibers" is deposited fully formed onto a HAK'ed web of Arnold, there is no motivation to further heat set such crimped and bound

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<sup>1</sup> Claim 7 reads:

7. A method of making a lofty nonwoven fabric laminate in a single, in-line process, comprising steps in the order of:
- a) depositing a first layer of filaments onto a wire;
  - b) bonding the first layer to an integrity sufficient to withstand high speed web transfer;
  - c) depositing a second layer of crimped homofilament fibers connected to the first layer while the first layer remains on the wire;
  - d) traversing the second layer of crimped homofilament fibers through a flow of heated air at a temperature, flow rate, and traversal rate sufficient to set the crimps of the fibers without substantial melt bonding or relaxation of the fibers and to provide an integrity sufficient to withstand high speed web transfer; and
  - e) bonding the heat set second layer and the first nonwoven layer in a manner having sufficient integrity to withstand high speed web transfer.

fibers of Kane, as per the ordered steps of Claim 7.

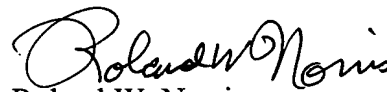
Particularly with respect to the Examiner's equating of the terms "melt" and "melt bonding," in section 11, it is first noted that the thermal bonding taught by Arnold would still reasonably apply only to the first nonwoven layer of the Claims and not to the lofty second layer of crimped homofilament fibers. To this extent, any discussion of Arnold's heat level in view of the Examiner's presently expressed bases of rejections is largely moot.

It is also respectfully submitted that the Examiner has focused on the wrong portion of the compound phrase "melt bonding." The emphasis with respect to the present invention as compared to the Arnold reference should be placed on "bonding." That is, the teaching of Arnold is to bind the fibers together. "Melt bonding" was used by Appellants in previous discussion in the general sense of "thermal bonding," as opposed to and distinguished from "adhesive bonding" or "mechanical entanglement. The Appellants therefore respectfully submit that they are not in error with respect to any contention because, when properly understood, Appellants have never contended that Arnold teaches a melting of its fibers, but only a "melt (thermal) bonding" of its fibers.

For all the foregoing reasons it is respectfully requested that the Board rule in Applicants' favor and overturn all outstanding rejections.

Favorable consideration is requested.

Respectfully submitted,



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